STORAGE

FEBRUARY, 1918.

ENTOMOLOGICAL NEWS

Biological & Medical Serials

Vol. XXIX. No. 2

PROPERTY OF TORONTO BRANCH ENTOMOLOGICAL SOCIETY OF ONTARIO
No. 1900.3
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PHILADELPHIA:
THE ACADEMY OF NATURAL SCIENCES,
LOGAN SQUARE.

Entered at the Philadelphia Post-Office as Second-Class Matter.

ENTOMOLOGICAL NEWS

published monthly, **excepting August and September**, in charge of the Entomological Section of The Academy of Natural Sciences, Philadelphia, and The American Entomological Society.

ANNUAL SUBSCRIPTION, $2.00 IN ADVANCE.

SINGLE COPIES 24 CENTS.

Advertising Rates: Per inch, full width of page, single insertion, $1.00; a discount of ten per cent. on insertions of five months or over. No advertisement taken for less than $1.00—Cash in advance.

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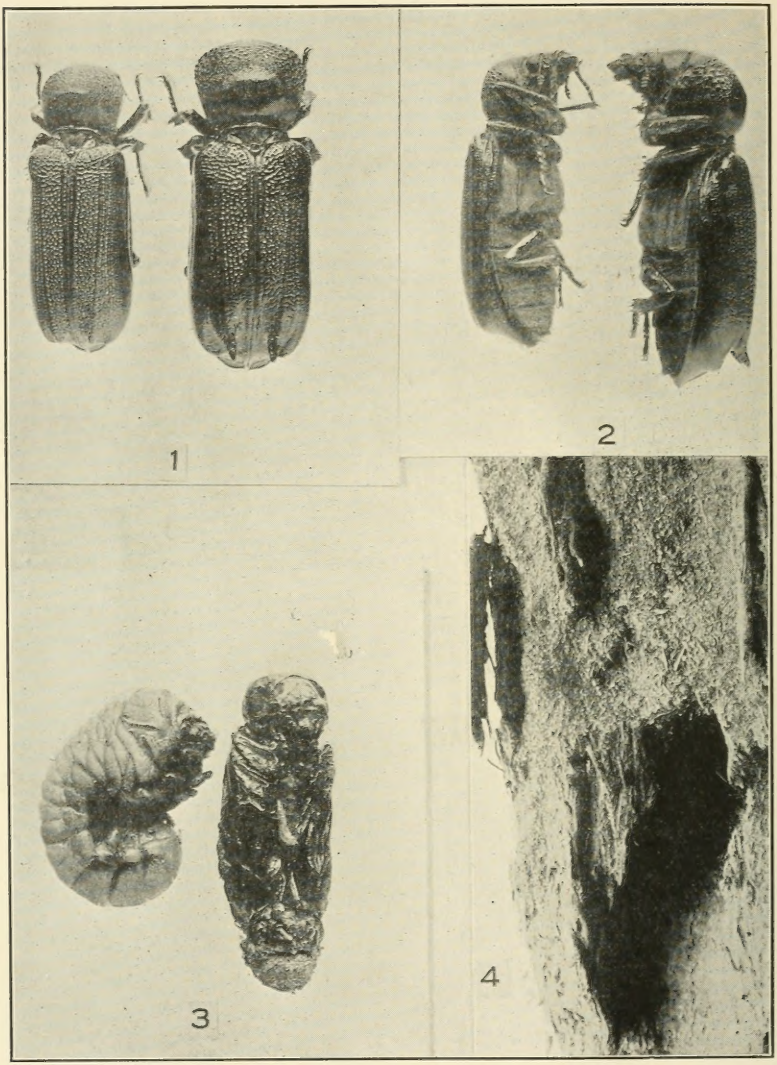

DINAPATE WRIGHTII—GARNETT.

ENTOMOLOGICAL NEWS

AND

PROCEEDINGS OF THE ENTOMOLOGICAL SECTION

THE ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.

VOL. XXIX. FEBRUARY, 1918. NO. 2.

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Notes on Dinapate wrightii Horn (Col.).*

By RICHARD T. GARNETT, Oakland, California.

(Plate II.)

This extremely rare Bostrichid, called by Hubbard the "dodo" of Coleoptera, was taken by the writer in Palm Canyon on May 21 and 22, 1917. Every dead or unhealthy specimen of the palm, *Washingtonia filifera,* in Palm, Murray, and Andreas Canyons was thoroughly examined. Of these only one log in the extreme lower end of Palm Canyon contained the beetle. This log, covered by driftwood, was wedged into a crevice in the rock strata fifteen feet above the summer stream level. From this log on the days mentioned 133 adults,

* Geo. H. Horn—Trans. Amer. Ent. Soc., XIII, 1886, pp. 1-4, pl. 1.
H. G. Hubbard—Proc. Ent. Soc. Wash., Vol. 4, pp. 228-230.
H. G. Hubbard—Entomological News, 1899, Vol. X, No. 4, pp. 83-89.
B. Fenyes—Rovart. Lapok, VIII, p. 4.
P. Lesne—Ann. Soc. Ent. France, Vol. 78, 1909, pp. 473-477, figs. 572 & 573.

28 pupae and 17 larvae were taken. Of the adults 81 were males and 52 females. When the log was discovered, one adult had made its exit, as was shown by the freshly bored exit hole. The colony therefore totaled 179.

Many other logs in these three canyons had exit holes in them, but with the exception of the one above noted all were black with years of weathering. The average number of exit holes, making a count of 20 trunks, was 14, the highest number being 21 and the lowest 2. A great many must perish and decay in their pupal cells if the colonies average anywhere nearly as many as the one which I found.

A few of the adults were yet soft from their change from the pupae, but the majority were hard and would undoubtedly have emerged in 7-14 days. Thus, if there are any survivors of this species, the time of emergence must be the latter part of June or the first part of July.

The galleries of the fully grown larvae averaged 18 mm. in diameter. This diameter was exceptionally constant for larvae of the curled type. The galleries crossed and recrossed each other in a confused manner, practically destroying all fibre in the region attacked, the powdered material being packed extremely compactly. The galleries never approached closer than an inch to the hard outer layer of the trunk and the very centre of the log for six inches in diameter was untouched. All the wood in between was completely riddled by the borings. The larvae were working usually at a depth of about 3 to 7 inches beneath the surface. Although the position of the log may have had something to do with it, almost all of the pupal chambers were either parallel to the surface of the log or nearly so. The exit holes were being bored almost perpendicularly from the pupal chamber to the outside.

Two of the larvae were of a much smaller size than the rest, thus tending to show that the life cycle is at least of two years' duration.

The weakening of the trunk by the galleries often causes the trees to fall, 19 logs occurring in Palm Canyon alone. A great many of the standing trees have exits visible on them, but usually only two or three per tree, most of them situated

within ten or twelve feet of the ground, although a few were noted near the tree crown. When occurring in prostrate logs, the exit holes seemed to be indiscriminately dispersed.

The attacks of this beetle are not always fatal as is shown by a number of standing and perfectly healthy trees with exit holes on their boles. If these holes are numerous the tree is generally dead.

In the larval, and possibly the pupal, stages this insect must be very resistant to water, as the log had apparently broken off at the roots during the winter of 1916, been carried down the canyon and jammed into the crevice by the high water. In this journey down the stream the water must have seeped into the interior of the log. A live larva was placed in water and was drowned in 28 minutes. This, however, is a more severe test of vitality than the water-soaked log was. A live adult was drowned in 15 minutes 35 seconds. Three hours in a strong cyanide bottle was insufficient to kill three of the adults.

Larva.—Robust, ventrally flat, dorsally convex; yellowish white, mandibles black; 9 abdominal segments, 3 thoracic; clypeus white, labrum darker and on anterior two-thirds densely, finely ciliate; labium and maxillae white with a line along their base chitinized; antennae 3-jointed, bisetose at tip. Body covered with short fine silky brown hair; body resembles that of a "white grub" being curled, however, the anterior segments are much the larger. Legs apparently 3-jointed (Horn says with 4 articulations), tarsal claw one and cleft. Length 46-63 mm. (All measurements following are from the anterior margin of the thorax to the tip of elytra.)

Pupa.—Resembles the adult, white; head, thorax, and elytra smooth, the latter bent under the abdomen between the middle and hind pair of legs; the most prominent costae and tubercles usually visible on the elytra; dorsal surface of the meso- and meta-thorax and of the abdomen visible; scutellum prominent; a row of fine recurved teeth across the dorsal side of each abdominal segment except the last, each row situated nearer to the posterior edge of the segment than to the anterior and on an elevated ridge; abdomen 9-segmented; on the end of the abdomen is attached the shriveled larval skin, the mandibles on the ventral side. Length 42-64 mm., width 15-20 mm.

Adult.—Cylindrical, shining black; head concealed from above by the thorax; antennae 10-jointed, first joint elongate and stout, over twice as long as the second joint which is also stout; joints 3 to 7 smaller and equal; joints 8 to 10 much wider and clavate, 8 and 9

triangular, 10 more rounded. Eyes large, prominent. Labrum distinct, anteriorly ciliate with silky brown hair.

Thorax very convex, sparsely clothed laterally with short brown hair; middle of anterior portion without the distinct bulge shown in Horn's figure of adult female; posterior half granulate with a median longitudinal sulcus smooth; anterior half with recurved dentate tubercles (teeth less pronounced in the females), the extreme anterior edge granulate only.

Elytra shining, glabrous; costae 4, the 2 outer indistinct; intervals of inner 2 costae foveolate, smoother towards sides; the 2 inner costae terminate in a tubercle (female), and in a robust tooth (male). Elytra bent downward behind the upper tubercle at an angle of 45-60 degrees. The declivity smooth in the male, granulate in the female.

Abdomen 5-segmented, all segments equal and fully visible; entire ventral surface covered with fine silky brown pile.

Legs more or less covered with hair, front coxae prominent, conical, trochanters prominent, femora stout, tibiae flat and acutely dentate externally, tarsi 5-jointed, claws simple and arcuate, 5th tarsal joint with a bristle-bearing pad.

Length 38-51 mm.; width 14-18 mm.

The adult is lumbering in its movements and has poor eyesight as one of the beetles escaped and while in flight collided with anything that came in its path, making its recapture easy. Although the wings are well developed, the heavy body impedes swift and unerring flight.

EXPLANATION OF PLATE II.

Dinapate wrightii Horn.

1. Adults, dorsal view—X 26/25. (Male with robust elytral tooth.)
2. Adults, lateral view—X 26/25.
3. Larvae and pupae—Natural size.
4. Larval gallery in wood of *Washingtonia filifera*—X 8/9.

Selenis sueroides (Lep.).

Mr. J. G. Bonniwell has recently sent me a specimen of *Selenis monotropa* Grote. It is labeled, "Bradentown, Florida, ex larva, August 17th." Mr. Bonniwell says: "My wife and I have raised quite a few of these from the larvae. It feeds on a variety of 'sensitive plant' and penetrates the stem to make its pupa." The species was described by Grote in the *Canadian Entomologist*, 1876, vii, 209, from Texas. We have specimens of the same moth from Cuba, in the Poey Collection, under the name, *Selenis sueroides* Guénée. *Sueroides* was described in 1852.—HENRY SKINNER.

New North American Species of Dolichopodidae (Diptera).

By M. C. Van Duzee, Buffalo, New York.

Parasyntormon lepus sp. nov. (Fig. 1).

♂—Length 2.75 mm. Face narrow, with gray pollen; front brown with brown pollen, wide; antennae black, nearly as long as the head, third joint nearly straight above, rounded below with a pointed tip, excised above so as to have the tip curved upward (Fig. 1), arista inserted on the upper edge at the point where the excision begins, shorter than the third joint; orbital cilia black above, brown below.

Dorsum of the thorax bronze black with brown pollen which forms two slight vittae in front with a shining black space between; pleurae black with gray pollen.

Abdomen dark coppery almost black with a few very short bristles at tip; venter yellowish; hypopygium small, its appendages are a pair of slender, nearly straight, pointed, brownish lamellae which are fringed with hair, back of these a short central filament about the same length as the lamellae.

Fore coxae yellow with their bases infuscated and with black bristles; middle and hind coxae black; femora yellow, their tops blackish; tibiae yellowish, the hind pair darkened towards their tips; tarsi darkened from the tip of the first joint; middle femora with a small bristle on each side near the tip; fore femora with delicate hairs on the lower side which are as long as the width of the femora; fore tibiae with a small bristle before the middle; middle tibiae with two strong bristles, one at first and the other at second third; hind tibiae with several bristles; fore tibiae about as long as the first three joints of their tarsi; first joint of fore tarsi with three small bristles at base below, second joint a little widened below, third and fourth joints about equal and without bristles.

Halteres and tegulae yellow, the latter with black cilia. Wings tinged with gray, slightly brownish in front of the second vein; second and third veins slightly diverging; fourth vein parallel with third and ending in the apex of the wing.

♀—Differs from the description given above in not having the femora blackened above except the hind pair at tip; the front tarsi are plain; the face wider; and third antennal joint much smaller.

Described from one male and one female in my collection, taken at Los Cerritos, Los Angeles County, California, March 21st.

Hercostomus unicolor Loew.

Dr. J. C. Bradley took two males at Blue Lake, Humboldt County, California, and a female which seems to belong to this species in Colorado. I took both males and females at Kearney, Ontario. Loew described it from Hudson Bay, and Wheeler from Wisconsin.

Asyndetus appendiculatus Loew.

Dr. J. C. Bradley took a male of this interesting species at St. Petersburg, Florida, August 10, 1910. Loew described it from Rhode Island.

Tachytrechus laticrus Coquillett (Figs. 3, 4).

♂—Length 5.5 mm. Face covered with yellow pollen which gives it a velvety appearance, rather narrow in the middle; palpi and proboscis black; antennae wholly yellow, third joint rather small, slightly pointed; arista black, dorsal, with a small lamella at tip, about as long as the height of the head; front black, dulled with yellowish pollen; ocellar tubercle prominent with two large bristles; orbital cilia black.

Thorax metallic black with bluish reflections on the dorsum, shining but dulled with brown pollen on the dorsum and silvery pollen on the pleurae; this white pollen extends along the front over the humeri but is interrupted before reaching the acrostichal bristles, these bristles small but forming two close set rows which reach a little beyond the middle of the dorsum; scutellum black with a slight depressed, pollinose space on each side, leaving a flat, shining, raised space in the center.

Abdomen metallic greenish black with considerable white pollen on the sides; hypopygium rather large, black, shining on the inner side, covered with whitish pollen on the outer surface; lamellae nearly

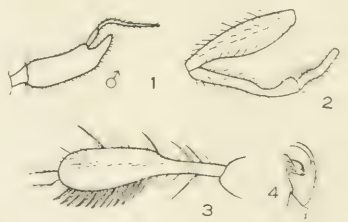

Fig. 1.—*Parasyntormon lepus* sp. nov., antenna.
Fig. 2.—*Hydrophorus curvipes* sp. nov., fore leg.
Fig. 3.—*Tachytrechus laticrus* Coq., fore tibia.
Fig. 4.— " " Coq., fifth tarsal joint of fore foot.

round, black, fringed with black hairs, inner appendages shining black.

Coxae black, with white pollen; fore coxae with yellow pollen and black hairs and bristles on the front surface; femora greenish black with white pollen, the extreme tips yellow; fore tibiae pale yellow with white pollen, much flattened on the distal two thirds (Fig. 3), inner edge of the flattened portion black and densely fringed with flattened, black bristles, near the base a more or less distinct brown ring; middle tibiae more or less yellow towards the base, sometimes mostly black; hind tibiae and tarsi black; middle tarsi somewhat yellowish at base; fore tarsi with the first joint mostly yellow, the following joints brown, last tarsal joint as figured (Fig. 4), claw with a very small tooth at base which would be difficult to see if the claw was not in a favorable position.

Halteres reddish yellow; tegulae pale yellow with black cilia. Wings grayish hyaline, slightly darker between the second and third veins; tips of the third and fourth veins nearer together than in the other eastern species, about as in *T. olympiae* Ald.

♀—As in the male except that the face is wider; arista plane, nearly as long as the face; pollen of the face and fore coxae white; fore tibiae plane, rather stout, yellowish, more brown towards the tip, with three large bristles on the inner and five on the outer surface (in one specimen there is an extra bristle on the inner side of one tibia); ovipositor black.

My specimens were taken by Mr. Harbeck at Manahawkin, New Jersey, July 30th.

I publish this as I cannot find any record of Mr. Coquillett's describing it, and probably it is only a manuscript name. I am using the name he gave so as to save confusion, as this species has gone into several collections under this name.

Paraclius nigrocaudatus sp. nov.

♂—Length 3 mm. A blackish species with black legs. Face very narrow below; antennae black, third joint rather large, oval.

Thorax and abdomen dark green, last segment of the latter coppery; hypopygium small, black, its lamellae very large, nearly as long as the hypopygium, half as wide as long, black, fringed with long black hairs on the edge next the venter.

Legs wholly black; fore tibiae with two rather large bristles; middle tibiae with five or six, regularly placed, prominent bristles on the upper front edge; hind tibiae thickened with stout bristles.

Tegulae pale yellow with black cilia; knob of the halteres yellow, stem darker. Wings strongly tinged with brown anteriorly, more

gray posteriorly; last section of fourth vein nearly straight, approaching the third almost from the cross-vein, but not forming an angle where it bends forward, its tip near the tip of the third vein, and far before the apex of the wing; last section of fifth vein about two and a half times the length of the cross-vein.

Described from one male taken at Beaver Creek, Montana, in August, by S. J. Hunter, at an elevation of 6300 feet.

This species and also *P. flavicornis* sp. nov. described in this paper have the venation something like that of a *Medeterus,* but the other characters are those of a *Paraclius.*

Type in the Kansas University collection.

Paraclius flavicornis sp. nov.

♂—Length 3.2 mm. Face silvery white, very narrow below; front pale green with thick white pollen; lower orbital cilia pale; antennae yellow, third joint not much darker at tip, rather small; arista black with short pubescence.

Thorax pale green, dulled with white pollen.

Abdomen brighter green with white pollen on the sides and with black hairs; hypopygium black with green reflections, yellow on the side next to the venter for its whole length; lamellae small, yellowish white with a few yellowish and a few black hairs at tips.

Coxae and legs yellow; fore coxae with a row of black bristles at tip; middle and hind coxae each with a black bristle on outer surface; middle and hind femora with a preapical bristle; fore and middle tarsi scarcely darker at tip; tip of hind tibiae and hind tarsi brown.

Tegulae, their cilia and the halteres pale yellow Wings grayish hyaline; veins yellowish brown, yellow at the root of the wings; costa darker; fourth vein with a slight bend before the middle of its last section; third and fourth veins nearly parallel towards their tips; fourth vein ending a little distance before the tip of the wing; last section of the fifth vein four or five times as long as the cross-vein.

♀—Length 3-4 mm. Face a little wider than in the male, cilia of the tegulae black; otherwise as in the male.

Described from two males and two females, taken at Bill William's Fork, Arizona, August and September, by F. H. Snow.

Type in the Kansas University collection.

Hydrophorus curvipes sp. nov. (Fig. 2).

♂—Length 3.5 mm., of wing 4 mm. Face broad, bright metallic green with scarcely a trace of brown pollen; front dark brown, opaque;

palpi rather small black; proboscis large, black; cheeks not visible below the eyes; below the proboscis there are a few delicate brown hairs; occiput green but so thickly covered with brown pollen that the ground color is scarcely visible; postorbital bristles extending to about the middle of the eye; postvertical bristles about four on each side, forming a row that joins the postorbitals both ways; in place of the usual beard there are numerous short black bristles; antennae black (third joint missing in the described specimen).

Thorax dark brown pruinose with slight coppery reflections, the space before the scutellum greenish; dorsum with two dark brown lines which reach from near the front to the depressed green area; scutellum with one pair of bristles; pleurae blackish, opaque.

Abdomen brown with coppery reflections and with the first segment green, clothed with short black hairs; hypopygium distinct, nearly globular, brown, gray pruinose as are also the sides of the abdomen.

Coxae black, fore pair with long, delicate, somewhat brownish, pale hairs on the front surface, these hairs much longer towards the base; femora dark metallic green, fore pair thickened; tibiae and tarsi black; fore tibiae bent near the apex, contracted at the bend (Fig. 2), tip enlarged, a close row of bristles on the lower side which is not interrupted at the bend; fore metatarsi nearly one-half as long as the tibiae and about as long as the remaining four joints together, bent and with a cluster of bristles on the inner side near the base.

Tegulae and their cilia brownish yellow; halteres yellow. Wings smoky, an indistinct brown cloud on the posterior cross-vein; veins black; first vein short; second vein long, extending out towards the tip of the wing and beyond the tip of the first vein running close to the costa until it merges into it; last section of fifth vein equal to the cross-vein in length.

♀—Occiput and front dark green, shining but somewhat dulled with brownish pollen; face shining blue-green with a little white pollen on the sides below; palpi black with a little white pollen on the outer edge and long black hairs; postvertical bristles in a row of about four on each side joining the orbitals which extend below the middle of the eye; beard black but scattering; antennae black, small, third joint oval.

Dorsum of thorax opaque brown with a darker brown line on each side of the acrostichal bristles and with some metallic reflections on the posterior portions; acrostichal bristles very small and scattering; dorsocentrals rather large, black; humerals two, and one behind the humerus and above the notopleural suture; notopleurals two; also a row of about five in front of the halteres; propleura with a group of about six bristles; scutellum shining green with one pair of large bristles.

Abdomen green with coppery reflections and stiff black hairs, dusted with white pollen which is more dense on the sides.

Fore coxae clothed with long bristle-like hairs on the front surface; middle and hind coxae also with stiff black hairs; fore femora a little enlarged at base and with rather long black hairs, but without spines below; fore tibiae at tip with a distinct angle produced towards the femora, without spines on the inner side, but with a few slender bristles above; last joint of all the tarsi slightly flattened.

Halteres pale yellow; tegulae yellowish with a fringe of dark brown hairs. Wings tinged with gray with a brown cloud on the cross-vein; longitudinal veins bordered with brown; costa stout beyond the tip of the first vein; veins brown, not paler at base of wing.

Described from one male and three females from California, the holotype male at San Diego on June 14; two females at San Diego, April 5th; the other female at Long Beach, Los Angeles County, February 28th. All were taken on salt water. Type in my collection.

This species runs in Prof. Aldrich's key (Psyche, Vol. xviii, p. 48) to *H. gratiosus* Ald., but is quite distinct, the shining green face, crooked fore tibiae and metatarsi and the second vein of the wing running so close to the costa make the male easily recognizable; the female can be separated by the black hair of the fore coxae and tegulae.

Hydrophorus argentatus sp. nov.

♂—Length 4.2 mm., of wing 5 mm. Face covered with silvery pollen, pointed below, somewhat wider and shorter than in *H. intentus* Ald., the portion below the suture being nearly an equilateral triangle; face slightly narrowed above; front seal brown; occiput with a row of spines extending each way from the postverticals, about six on each side and joining the orbitals rather far down; orbitals extending nearly to the lower corner of the eye; palpi black; antennae black, third joint large, about as broad as long, irregular in outline.

Thorax covered with brown pollen, flattened space before the scutellum shining bronze brown; propleurae with rather long white hair and one black bristle.

Abdomen bronzed or coppery; hypopygium concealed, not cutting into the fourth sternite.

All coxae with fine white hairs; fore femora rather thick on basal portion, with two rows of spines below; anterior tibiae nearly straight with a slight projection on inner side at tip and a row of small spines on inner surface.

Knob of halteres yellow, stem darker. Wings tinged with grayish brown; a distinct hyaline spot back of the base of the fifth vein and brown clouds on the cross-vein and middle of the last section of fourth vein.

Described from two males from California; one taken at Los Cerritos, Los Angeles County, March 21st, the holotype at Berkeley, Alameda County, May 27th. Type in my collection.

A female, taken at San Diego, California, on April 25th, may belong to the same species but has the pollen of the face more yellowish or brownish yellow, but otherwise about as in the male.

This species is quite distinct from *H. intentus* Ald., although this difference is difficult to put into words, but *intentus* is covered all over with a distinctly yellow pollen, while in this species the pollen is more gray, that of the face is silvery or only a little yellowish at most. This species is also a little stouter than *intentus*.

Corrections to "New York Scolopostethi" (Family Lygaeidae: Heter.).

By H. G. Barber, Roselle Park, New Jersey.

In the February, 1917, number of Entomological News, pp. 65-68, appeared a paper on the "New York Scolopostethi" by J. R. de la Torre-Bueno, in which occur a number of grave errors which need correction. The sub-family Aphaninae or Rhyparochrominae (page 65, lines 18-23) is characterized by having the suture between the third and fourth ventral segments (not the second and third) more or less curved. The tribe Lethaeini (page 65, lines 23-26) was separated by Stål from the other tribes or divisions because of the position of the posterior glandular opaque spot on both sides of the fourth ventral segment, which in this case is placed closer to the anterior spot, far removed from the posterior margin of the segment. In 1913 Dr. Bergroth called in question the tribal value of these glandular spots, so far at least as the Lethaeini of

the world are concerned, and advocated uniting this tribe with the Rhyparochromini. However, the consideration of the position of these glandular spots as a tribal character for our United States Lethaeini certainly succeeds in grouping together, without other characters, a fairly well unified group of genera.

In his synoptic key (pp. 66-67) for separating the three species of *Scolopostethus*, Mr. Bueno, in following Horvath 1893, perpetuated his error in reference to the ocular setae. Dr. Horvath, in Rev. d. Entomol., XII, pp. 238-241, 1893, published a description of the three American species of *Scolopostethus*, remarking that *S. atlanticus* and *S. diffidens* differ from the introduced European *S. thomsoni* by the absence of the two setae placed near the eyes. As a matter of fact all three species possess these setae. It is also inadvisable to use claval punctures for specific diagnosis. The spines of the fore femora are more dependable as a specific character, but these are subject to considerable variation.

The following key will serve to differentiate the three species of *Scolopostethus*:

1 (4). Hemelytra strongly fasciate with fuscous posteriorly.

2 (3). Membrane commonly fuscous, variegated with pale, with a large pale spot on each side in macropt. form. Lateral margins of pronotum straight. Anterior femora armed with smaller spines only towards apex from the larger spine....*S. atlanticus* Horv.

3 (2). Membrane in macropt. forms commonly pale with the veins fuscous and without the pale spot on each side. Lateral margins of the pronotum obviously concave. Anterior femora armed with smaller spines both before and behind the larger preapical spine, *S. thomsoni* Reut

4 (1). Hemelytra not strongly fasciate with fuscous posteriorly, merely slightly embrowned. Lateral margins of the pronotum nearly straight. Membrane dark brown with a pale spot on each side in both macropt. and brachypt. forms....*S. diffidens* Horv.

Mr. de la Torre-Bueno has one of the specimens from Colorado recorded by Uhler in Gillette and Baker's *Hemiptera of Colorado*, 1895, as *Eremocoris tropicus* Dist. This particular specimen is *S. thomsoni* Reut.

New Species of Buprestidae (Col.) from the Pacific States—No. 2.

By Edwin C. Van Dyke, University of California, Berkeley, California.

The following descriptions are in the way of a supplement to some species described in a previous paper.[1]

Poecilonota bridwelli n. sp.

Elongate-oval, sub-depressed: brassy green with the exception of the antennal and tarsal joints which show a cupreous tint; the front and prosternum moderately densely clothed with long white hair, the surface elsewhere including the pronotum and elytra more sparsely clothed and with shorter and more depressed pile; the depressed areas above and the greater portion of the under surface coated with a white powdery substance; antennae not reaching hind margin of pronotum; front slightly sulcate and coarsely punctured; pronotum less than three-fourths as long as broad, side margins almost straight and parallel for posterior three-fourths then gradually rounded to apex, disc with a smooth median elevated longitudinal line extending from base to apex and broadest at middle, with a shallow and equally broad depression on either side, a secondary, punctured, and irregular ridge outwardly bounding these, the sulci and sides coarsely and cribrately punctured; elytra three times as long as pronotum and slightly broader at humeri, side margins almost straight and parallel for anterior two-thirds, thence suddenly narrowed and slightly sinuate to apex, the tips hardly prolonged, but slightly divergent, and truncate at apex, the disc with intervals 1-5 distinctly elevated, rounded, and continuous throughout greater portion, intervals 7 and 9 equally elevated but frequently and broadly interrupted, intervals 6, 8 and 10 less evidently elevated and more interrupted, the more continuous intervals coarsely punctured at irregular distances, the striae finely punctate; the underside in front rather finely and sparsely punctured in median area and more coarsely and cribrately so at sides, the abdomen with a smooth area down the middle and with sides coarsely and aciculately punctured. Length 13 mm., breadth 4.5 mm.

♂. Prosternum rather densely clothed with long silky white hair and the last ventral deeply and broadly emarginate.

♀. Prosternum less densely clothed and with shorter hair and the last ventral with small triangular incisure

The description given above was based upon a single male.

[1]New Species of Buprestidae (Col.) from the Pacific States, by Edwin C. Van Dyke, Entom. News, Vol. XXVII (1916) pp. 405-412.

The only other specimen seen, the companion female, differs somewhat as regards the sculpturing of the elytra, all of the intervals here being broadly and frequently interrupted so that they present a chain-like or catenulate appearance instead of the more or less regular one which is observable in the male.

This species differs materially from our other species, by its uniform brassy green color, its more evident hairiness, the more distinctly defined longitudinal sulci of the pronotum, and the greater elevation of the elytral intervals, resembling in this last regard some of our *Dicercas,* such as *D. tenebrosa* Kirby.

Type male and female from Imperial County, California, June, 1911, collected on flowers by Mr. J. C. Bridwell. The type male is in my own collection, the type female in the collection of the University of California. The species is named in honor of the collector.

Melanophila californica n. sp.

Elliptical, sub-depressed; bronzed above, brassy green beneath; with minute, short, erect, white hair sparsely scattered over the elytra, denser and more oblique on under side of body; front of head convex, shining, densely, coarsely and closely punctate, the median punctures somewhat elongated; pronotum two-thirds as long as broad, widest near base, distinctly narrowed in front, sides feebly arcuate, hind angles acute, marginal line obliterated in front, disc rather evenly, coarsely, closely and regularly punctured, the punctures rarely confluent; elytra three times the length of pronotum and but slightly broader, densely granulate-punctate, without costae, lateral margin finely serrulate towards apex, apices obtuse; beneath coarsely and densely punctate in front and more finely and sparsely behind; tip of prosternum suddenly constricted; last ventral segment obtusely rounded, with a subserrate ridge below the side margin near the apex; posterior tarsi with the first joint not longer than the next two. Length 8.5 mm., breadth 3.5 mm.

♂. Generally narrower, with outer joints of antennae broader, and with last ventral subtruncate at apex.

♀. Generally broader and with sides of pronotum slightly depressed, with outer joints of antennae less serrate, and with last ventral more rounded at apex.

The color of the upper surface may vary from greenish or coppery bronze to a very dark purplish bronze and that of the under surface from the usual greenish to a deep bronze. Specimens are generally

immaculate but they may have from one to three well defined yellow spots on each elytron, situated as in the spotted forms of *M. fulvoguttata* Harr. and *M. drummondi* Kirby.

This species in the table of Dr. Horn[2] would come immediately after *M. fulvoguttata* Harr. It differs from this by being generally narrower and more convex, more brilliant, with more acute hind angles to the thorax, a more densely punctured pronotum, and by having a subserrate ridge on the last ventral segment near the side margin. From *M. intrusa* Horn which it superficially resembles, it differs by being generally larger, by having the sides of the thorax less parallel, and by lacking the uniformly dispersed pile on the elytra; and from the recently described *M. piniedulis* Burke,[3] a closely related species, it differs by being larger and more convex, by never having the elytral maculations more than mere spots, by having the thorax longer and with sides less parallel and by not having the submarginal ridge of the last ventral either so distinctly serrate or continued around the apex of the segment.

My series of fourteen specimens represents material taken at Carrville, Trinity County, El Dorado County, Tuolumne County, Shasta County, and Mount Wilson, Los Angeles County, and from the yellow pine, *Pinus ponderosa* Dougl., Jeffrey pine, *P. jeffreyi* Vasey, digger pine, *P. sabiniana* Dougl., and the big-cone spruce, *Pseudotsuga macrocarpa* Mayr., the Mount Wilson specimens being captured on this last. Besides my series, I have examined at least thirty more specimens, chiefly in the collections of Mr. H. E. Burke and Mr. Ralph Hopping. The species is apparently confined to California and in Northern California and the Sierras seems to be found only about the pines, while its more common relative, *M. drummondi* Kirby, has a preference for the Douglas fir, *Pseudotsuga taxifolia* Britt.

Type male from Carrville, Trinity County, California, July

[2]Revision of the species of some genera of Buprestidae by George H. Horn, Trans. Am. Ent. Soc. Vol. X (1882) p. 102.

[3]A new Buprestid Enemy of Pinus Edulis by H. E. Burke, Proc. Ent. Soc. Wash. Vol. IX (1908) pp. 117-118.

1, 1913, collected on *Pinus ponderosa* Dougl. by myself, in my own collection; one paratype deposited in Academy of Natural Sciences of Philadelphia.

Chrysobothris falli n. sp.

Form and appearance nearly that of *C. caurina* Horn, sub-depressed, upper surface piceous with cupreous punctate areas, head, sternum and femora, viridocupreous, tibiae and abdomen with a greenish purple lustre; antennae gradually more slender towards tip, third joint as long as the next two, front flat, coarsely, somewhat cribrately punctate, with two small callosities between eyes, and clothed with fine white, erect pile, clypeus triangularly emarginate, with sides of emargination rounded externally; thorax with length two-thirds of breadth, with sides slightly divergent forwards from base, sinuate at middle, and obliquely constricted towards anterior angles, disc moderately convex, a rather shallow though well defined median sulcus densely punctured, a flat but irregular callosity bounding it on either side and extending from base to apex, two irregular callosities, one anterior and one posterior, between this latter and sides, the surface otherwise moderately densely punctured, and with a small amount of white pile at the sides; elytra well rounded at humeri, with sides somewhat parallel from in front to beyond the middle, thence slightly arcuate and convergent to hind angles, disc slightly convex, the sutural costa well defined, broader and flatter in front, narrower and cariniform posteriorly and from middle to apex almost straight and but slightly diverging from suture, the second costa less elevated and defined, but interrupted one-third from base and one-third from apex, the third only evident in median portion of elytra, the fourth feeble, all the costae joined by certain irregular, flat, smooth and transverse areas which are more or less aggregated or joined into transverse bands, especially just back of base, at middle, and towards apex, the depressions all coarsely and densely punctured, and like the elevations, with a tendency to be formed into transverse belts as is the case one-third distant from the base and one-third from apex; body beneath shining and quite smooth posteriorly; prosternum slightly lobed at middle in front, quite densely punctured, and moderately pilose; anterior femora with a broad obtuse tooth, serrulate on outer edge; last ventral with its margin serrulate. Length 11 mm., breadth 4.5 mm.

♂. Prosternum more finely and densely punctured; anterior tibia arcuate, rather abruptly dilated at tip, the dilatation being a lamina arising from the posterior side about one-fourth distance from apex and gradually arcuately widening until near apex where slightly notched, obliquely truncated at apex; middle tibia less arcuate, gradually broader from apical third to tip, the posterior tibia straight; last ventral seg-

ment semi-circularly emarginate, the last dorsal moderately punctate and with a triangular emargination at tip.

♀. Prosternum more coarsely and sparsely punctured; anterior tibia moderately arcuate, gradually wider to tip, the middle less arcuate and gradually wider to apex, the posterior straight; last ventral longer than in male and with a shallow apical emargination; last dorsal more grossly and closely punctate than in male and with a small apical notch; the head, sternum and femora with more of a purplish lustre; size slightly larger than male, length 12 mm. and breadth 5 mm.

This species has the facies of *C. caurina* Horn and is in fact most closely related to it, though it is also sometimes confused with *C. monticola* Fall. It differs from *C. caurina* Horn in being more shining and in having the elytra elevations more flattened, the sutural costa less definitely explanate towards the apex, the clypeal emargination less acute, and in not having the apical dilatation of the anterior tibia in the male suddenly constricted at apex. From *C. monticola* Fall it can be told by being generally smaller, more shining, by having the elytral elevations flatter, the prosternal lobe much less distinct, the upper margin of the eyes less close together, the dilatation of the anterior tibia in the male not as broad nor evenly rounded off towards the apex, and by having the space between the suture and the sutural costae more or less checkered by alternate callosities and punctured areas, a feature which it sometimes shares with *C. caurina* Horn and which, though superficial, is quite characteristic.

A series of eighty-one specimens has been examined and from the following localities, all in California: Independence Lake, Nevada County, July 12-18, 1916; Donner Lake, Placer County, July 3-8, 1916; Tahoe Tavern, Lake Tahoe, July 21, 1916, all collected by R. T. Garnett; Tuolumne Meadows, Yosemite National Park, July 18 and 19, 1916, by G. R. Pilate, and Forest Hill, Placer County, April, 1898, by myself. The major portion were secured by Mr. Garnett at Donner Lake on yellow pine, *Pinus ponderosa* Dougl., and at Independence Lake on Jeffrey pine, *P. jeffreyi* Vasey. At the same time were also collected one hundred and eighty specimens of typical *C. caurina* Horn and several typical *C. monticola* Fall. This species most likely somewhat replaces *C. caurina* Horn

in the Middle and Southern Sierras and is there generally found in company with *C. monticola* Fall, as is the other with it in the more northern parts of the State.

Type male and female from Donner Lake, Placer County, California, July 5 and 6, 1916, in my own collection; paratypes deposited in United States National Museum, Academy of Natural Sciences of Philadelphia, and California Academy of Sciences. The species is named in honor of my good friend, Mr. H. C. Fall.

Chrysobothris laricis Van Dyke.

In a small series of specimens of *Chrysobothris* received from Mr. G. R. Pilate and collected by him in the Tuolumne Meadows of the Yosemite National Park, July 11, 1916, I found five females and one male of the above-named species. These specimens all differ slightly from the typical phase found in Eastern Oregon, in being more cupreous and brilliantly metallic, by having the transverse punctate areas of the elytra more definitely defined, the sutural elevation more widely explanate near the apex, and the dilated portion of the anterior tibia in the male less broad though of the same type. These differences, however, are simply differences in degree and show that the species, like all of its relatives, is variable. In this more southern area it also most likely breeds in the lodge-pole pine, the dominant tree in the region. The western larch does not extend into California.

Chrysobothris exesa Lec.

Within the last few years I have seen several specimens of the above-named beetle that were taken in California, one taken in 1912, in Imperial County, by J. C. Bridwell and the others taken at Palm Springs, Riverside County, in April, 1917, by G. R. Pilate. These latter were taken on mesquite, *Prosopis juliflora* D. C., making the sixth species of the genus that I know of that lives on this tree, the others being: *C. octocola* Lec., *C. debilis* Lec., *C. mali* Horn, *C. merkelii* Horn, and *C. gemmata* Lec. The last, however, has not been recorded from California.

The Bembicine Wasps (Hym.).

By T. D. A. Cockerell, University of Colorado, Boulder, Colo.

Entomologists are greatly indebted to Professor J. B. Parker for his exhaustive study of the Bembicine wasps of North America, published in *Proceedings, United States National Museum,* Vol. 52, pp. 1-155 (1917). The work represents the labor of years, and includes full descriptions, tables of genera and species, and excellent illustrations. Strangely enough, for reasons which it is hard to comprehend, the author has failed to complete his elaborate treatment by giving adequate particulars concerning the localities of the new species. After so much labor, why was that of copying the labels of the specimens described too great to be undertaken? Why was it considered,—if the matter was considered,—that in a State containing six different life zones the type locality of a species was a matter of utter indifference? There is no good reason why entomologists should not conform to the rules of procedure in describing new species, which are well established in botany, ornithology and other kindred sciences. It is just as easy to do these things properly as any other way, and it seems a pity that entomological writings, so admirable in nearly every respect, should fail where failure could so readily be avoided. There are two orders of insects, the Orthoptera and Odonata, in which the treatment in practically all recent American papers is above reproach. These orders have been fortunate in being studied by men who were well acquainted with the best methods employed in other departments of zoology. Why should not Lepidopterists, Hymenopterists and Coleopterists take note?

In the particular case under discussion I have thought it useful to ascertain the type localities of many of the new species and publish the data. For the particulars given I am greatly indebted to Mr. S. A. Rohwer and Professor S. J. Hunter.

(A.) Types in University of Kansas.

Bembix helianthopolis. Type ♀, Graham Co., Kansas, 2130 ft., August 16, 1912 (F. X. Williams). Allotype ♂, same data; also two paratypes with same data, and one paratype from Trego Co., July 12, 1912.

Bembix latifrons. Albuquerque, New Mexico, Aug., 1894 (Snow).

Microbembex aurata. Three paratypes, collected by F. H. Snow in Arizona, at Bill Williams Fork, Aug.; Congress Junction, July; Baboquivari Mts.

Stictiella melampous (sic!). Nothing to add except that date is Aug. 18.

Stictiella divergens. Type, Sheridan Co., Kansas, 2650 ft. (F. X. Williams). Paratype, Ness Co., Kans., 2260 ft., July 7, 1912 (Williams).

Bicyrtes annulata. Type, Oak Creek Canon, Ariz., 6000 ft., July (F. H. Snow).

Bicyrtes gracilis. Add 5000-8000 ft., July.

(B.) Types in the United States National Museum.

Stictiella melanosterna. Type ♂ and allotype ♀, Las Cruces, New Mexico (Cockerell). The type was taken in 1894.

Stictiella callista. Type ♂, Mesilla Park, N. M., at flowers of *Chilopsis linearis,* June 9, 1898 (Cockerell). Allotype ♀, Mesilla, N. M., at flowers of *Leucosyris spinosus,* July 21 (Cockerell).

Stictiella bituberculata. Type ♂, San Bernardino County, Calif. (Coquillett). Allotype ♀, mouth Los Gatos Canon, Mt. Diablo R., Fresno County, Calif., June 2, 1907 (Bradley).

Stictiella megacera. Allotype ♂, N. Yakima, Wash., July 17, 1903 (Eldred Jenne).

Bicyrtes annulata. Paratypes; Albuquerque, N. M. (Ashmead collection); Mesilla Park, N. M., Sept. 18, 1899 (Cockerell); El Paso, Texas, Aug. 21, 1908 (F. C. Pratt).

Bembix arcuata. Type, Cotulla, Tex., May 11, 1906 (J. C. Crawford).

Bembix hinei. Type ♂, Galveston, Tex., May (Snow); allotype ♀, Padre I., Texas, June 29, 1895.

Bembix comata. Type ♂ and allotype ♀, California (no other data on labels).

Bembix melanaspis. Type ♂, Los Angeles Co., Calif. (Coquillett). Allotype ♀, California (Baker, 2363).

Microbembex aurata. Type ♂ and allotype ♀, Los Angeles Co., Calif. (Coquillett).

Microbembex hirsuta. Type ♂ and allotype ♀, Brewster Co., Tex.; Rio Grande, June 13 to 17, 1908 (Mitchell and Cushman).

Steniolia albicantia. Type, Grand Coulee, Columbia R., Wash., July 12, 1902.

The type of **Bembix rugosa** is labelled only "Arizona."

(C.) Types at the Academy of Natural Sciences of Philadelphia.

Bembix foxi. Type ♂ and allotype ♀, Illinois [labelled "Ill."].

A new Genus of Cyrtidae from South America (Dip.).*

By Frank R. Cole, Scientific Assistant, United States Bureau of Entomology.

In preparing a monograph of the *Cyrtidae* of North America, the writer has had access to the collection in the National Museum. In this collection of *Cyrtidae* there are a few specimens from Chile, South America, collected by C. E. Reed. One specimen labeled *Lasia dimidiata* seemed to be so entirely different in general appearance from any known species of that genus that I took the trouble to examine it more closely. This specimen is of an undescribed genus, quite far from *Lasia,* and belongs in another subfamily—the *Oncodinae.* The abdomen has evidently been broken off and is glued on to the thorax at an impossible angle. One of the front legs is broken off in the middle of the femur and the last four joints of the tarsi are broken off from the other front leg.

VILLALUS new genus.

Head hemispherical and composed almost entirely of the eyes. Eyes touching from vertex to antennae and from small space at antennae to the tiny mouth parts. The mouth parts are rudimentary and the facial triangle much reduced and on the under side of the head. There is no proboscis. The eyes are thickly covered with very short pile. Antennae small and apparently two-jointed (see Fig. 3), the first joint being sunken in the head; second joint cylindrical and not much longer than broad; the third joint radish-shaped and with a slender style which is enlarged slightly at the tip and ends in a microscopic bristle. Ocellar tubercle rather small, with three ocelli, forming an equilateral triangle (see Fig. 4). Occiput slightly swollen and with short hairs.

Thorax large and swollen in appearance with rather short recumbent hair. Upper pleurae swollen and covered with hair. Humeral callosities quite large but widely separated. Post-alar callosities of medium size. Scutellum rounded and about as long proportionately as in *Oncodes.* Legs including

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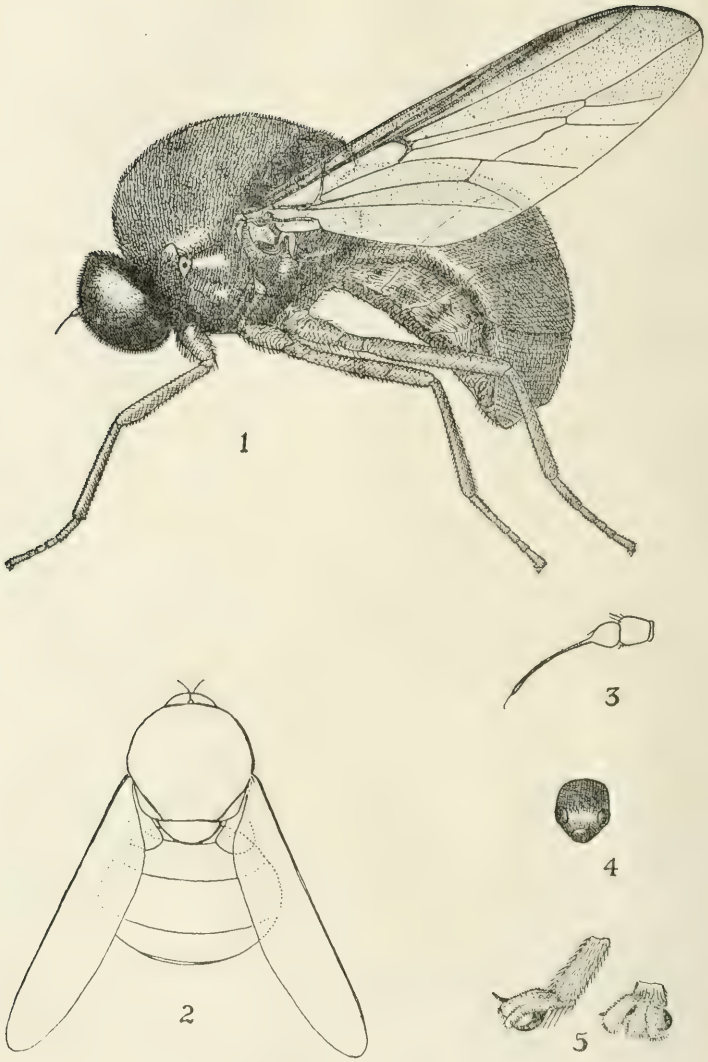


Villalus chilensis n. gen. et sp.

Fig. 1.—Entire insect. Fig. 2.—Outline sketch of dorsal view. Fig. 3.—Antenna, much enlarged. Fig. 4.—Ocellar tubercle, much enlarged. Fig. 5.—Last tarsal joint and ungues, showing the three pad-like pulvilli. Much enlarged.

coxae with thick short hairs, legs of normal size and structure, the ungues rather short. (See Fig. 5.)

Abdomen quite large in proportion to body, the venter probably flat in life, or slightly convex (in this specimen it has been drawn in when the body dried). The abdomen is composed of six segments.

Wings rather long and narrow and of the general shape of the wing of *Eulonchus* sp. Squamae large and of rather thick membrane as in *Oncodes*. Alula not projecting. Venation quite different from any known genus of this family. The auxiliary, first and second veins are rather long and heavier than the other veins. There is a long cell above the discal cell, the outer first basal cell, present in some other genera. The third vein is not forked and ends in the apex of the wing. There are four posterior cells, all widely open. Second basal cell much longer than the first. Anal cell long and narrowed in the margin. Anal vein does not quite reach the margin of the wing. The membrane of the costal, subcostal, marginal, submarginal, outer first basal and first posterior cells covered quite thickly with short hairs.

Villalus chilensis new species.

Head and eyes black. The reddish-brown antennae are small, the first apparent joint cylindrical, the second joint (actually the third) radish-shaped and with a rather long slender style which expands a little near the tip and ends in a thin microscopic bristle.

Thorax brownish-yellow with rather thick short pile of a dark yellow color. Scutellum, humeral and post-alar callosities brownish-yellow. Pectus blackish. Halteres brownish yellow. Legs, including coxae, pale yellow, ungues black.

Abdomen brownish-yellow with a reddish tinge, and clothed with rather short reclinate yellow pile. Venter (probably somewhat discolored) a paler yellow, with dark spots on second, third and fourth segments. Genitalia very inconspicuous.

Wings rather long, the anterior half clouded with brown, darker near the costa. Squamae brownish hyaline, margined with black and with yellow hairs on the surface. Costa and veins blackish-brown. Membrane of the costal, subcostal, marginal, submarginal, outer first basal and first posterior cells covered with very fine short hairs of brownish color. Auxiliary, first and second veins long and heavy. Cross-veins separating first basal cell from marginal, submarginal and outer first basal

cells quite heavy. Third vein unforked and ending in the wing tip. Second basal cell almost twice the length of first basal and about as long as discal cell. Supernumerary cross-vein at base of first posterior cell parallel with the short vein between the discal and second posterior cells. All of the posterior cells are widely open. There are only two veins emerging from the discal cell, the third branch, found in *Eulonchus, Lasia* and a few others having disappeared.

Type.—United States National Museum, No. 21074. One specimen. Habitat.—Chile.

The genus *Holops* Phil. is probably the nearest to *Villalus*. *Holops inanis* Phil. is yellow with yellow pile and has the anterior margin and apex of the wings infuscated. Philippi in his brief description mentioned that the small mouth opening was triangular. He stated that he could see no proboscis (as in *H. cyaneus*), but thought it might possibly be strongly retracted. No mention is made of the wing venation. The head of *Villalus* is like that of *Holops* and the antennae of like structure and similarly placed. If the figure of *H. cyaneus* given by Philippi can be relied on, the venation is quite different from *Villalus*. Verrall in "British Diptera," Vol. V, p. 451, has a figure of the wing of *Holops nigrapex* Big. which is like that shown by Philippi in his "Aufzählung der chilenischen Dipteren." In both of these figures the third vein is forked and the veins posterior to this do not reach the wing margin. Also the anal cell is closed some distance from the margin and the discal cell has a third vein emerging from it, missing in *Villalus*. This is the only *Cyrtid* that I know of which has short hairs on the wing membrane.

Verrall in "British Diptera" stated that *Megalybus* gave a clue to the venation of *Oncodes* and *Acrocera* and was a type intermediate between *Eulonchus* and *Astomella*. This genus *Villalus* has a venation very nearly approaching that of *Megalybus*. We see in this form a modification of the more complex venation of *Lasia, Eulonchus* and *Pteropexus,* and a suggestion of the still more simplified venation of *Oncodes*.

Material Desired (Coleoptera).

Dr. W. D. Pierce, Bureau of Entomology, Washington, D. C., desires to receive for study material in *Gymnaetron, Linaria* and *Miarus*.

The North American Species of Cerchysius, Females (Hym., Chalcid.).

By A. A. Girault, Glenn Dale, Maryland.

Scrobes forming a semicircle. Head densely scaly. Wings hyaline. Mandibles stout, with three nearly equal teeth.

First two pairs of legs yellow except coxae. Scape concolorous. Ovipositor extruded for two-thirds the length of the abdomen, somewhat compressed. Body densely scaly. Dark metallic blue. Tegulae blue.

Hind legs concolorous except proximal three tarsal joints; marginal vein nearly twice longer than wide, a little shorter than the postmarginal, the latter a little over half the length of the stigmal; frons moderate, with several rows of minute punctures on each side; scape slender, very slightly, linearly exfoliated ventrad; pedicel nearly twice longer than wide. Lower face with obscure thimble punctures. A trace of yellow against the marginal vein; venation yellow brown. Elongate,

pallipes Provancher.

Middle legs entirely yellow except the coxae, the other femora more or less concolorous.

Scape concolorous. Legs fuscous except the cephalic femora (washed), hind femora except at each end and the coxae; funicle 1 shorter than 2 by a half. No scrobes. Ovipositor as long as the abdomen ..... *caudatus* Cameron.

Scape honey yellow; ovipositor valves broad, testaceous as is the venation. Flagellum brown-black. Base of cephalic femora, basal two-thirds of hind femora and all coxae concolorous, the rest of the legs dark reddish .....*hubbardi* Ashmead.

Middle legs, besides the coxae, more or less concolorous. Scape concolorous. Femora widely reddish at apex (the first two pairs). Postmarginal vein not as long as the stigmal.

Basal half of cephalic femora, base of middle femur broadly, hind femur except at apex, coxae, base of middle and hind tibiae above, concolorous; legs reddish; scape slender; marginal and postmarginal veins subequal, the veins yellow; ovipositor valves extruded for half the length of the abdomen, much compressed; scutellum densely, finely punctate; thorax convex,

elasmoceri Ashmead.

Legs the same but hind legs entirely concolorous except the first three tarsal joints and apex of the tibia and the middle legs all reddish except a metallic spot above near base and the coxae; tarsi white, the legs reddish; scape with a moderate ventral dilation which is very distinct (much broader than the very slight exfoliation in *pallipes*); funicle 1 about twice longer than wide, subequal to the pedicel. Venation dark, the marginal

vein a little shorter than the postmarginal; ovipositor valves slender, extruded for three-fourths the length of the abdomen; scutellum scaly like the rest of the body. Thorax flattened as in *pallipes*. .....*marilandicus* Girault.

First two femora almost entirely concolorous. Postmarginal vein elongate, longer than the long stigmal. Legs concolorous except apex of tibiae very narrowly, distal third of middle tibiae, tarsi and middle trochanters which are reddish; frons scaly, with four rows of punctures, not as broad as in *marilandicus*; lower face with small, scattered punctures; eyes shorter; scape slightly dilated, the pedicel longer than any funicle joint. Funicle 1 smallest, subquadrate, 2 longest, a third longer than wide; maxillary palpi black; marginal vein twice longer than wide; ovipositor valves very slender, nearly as long as the abdomen. Scutum and scutellum with scattered punctures, scaly.

whittieri new species

Cerchysius whittieri n. sp.

♀. Somewhat smaller than *marilandicus*, the abdomen shorter, the thorax more convex. The male is similar but has the flagellum filiform and clothed with soft hairs, the solid club longer than funicle 1 which is longest, nearly thrice longer than wide, 6 longer than wide, longer than the small pedicel. Mandibles tridentate. Maxillary palpi 4-jointed.

Scrobes longer than in *marilandicus*, the frons narrower, the eyes smaller. The elongate postmarginal vein is characteristic and the species is probably a *Hemencyrtus*.

One pair, San Francisco, California (Alex. Craw). From *Lecanium oleae*.

Types: Catalogue No. 20663, United States National Museum, the pair on tags, their heads and fore wings on a slide.

A Correction Concerning Labia annulata and Labia dorsalis. (Dermaptera; Labiidae.)

We wish to draw attention to an error recently made by us, Trans. Am. Ent, Soc., XLIII, p. 318. We have there given *Labia dorsalis* (Burmeister) as a synonym of *Labia annulata* (Fabricius) and have supplemented this by stating that no differences between the descriptions of these species could be found. As a matter of fact *annulata* and *dorsalis* are widely distinct species as understood by us, belonging to different sections of the genus as was pointed out elsewhere in that same paper, and when the group has been thoroughly studied will probably be found to require even generic separation.

This confusing mistake was made through including in the rough manuscript an earlier and unverified incorrect note to this effect, which was in consequence incorporated, but inexcusably overlooked in both the reading of the finished manuscript and the proof.—MORGAN HEBARD, Philadelphia, Pa.

Argynnis apacheana, a New Name (Lepid.).

By Henry Skinner.

I propose the name *apacheana* for the species of *Argynnis* described and figured by Mr. W. H. Edwards in Volume I of his *Butterflies of North America,* plate IV of *Argynnis,* figures 1, 2, ♂, 3, 4, ♀, under the name *nokomis.*

What he originally described as *nokomis* in the *Proceedings of The Academy of Natural Sciences of Philadelphia* for the year 1862, page 221, is a different species. The type was a male and he gave as the locality, "Rocky Mountains, and Mountains of California." He also says, "This is much the largest of the Pacific species, equalling the largest specimens of *Cybele.* In color it most resembles *Aphrodite.* The female I have not seen." This is the same species which he subsequently described under the name *nitocris,* in the *Transactions of the American Entomological Society,* 1874, Volume XV. The type of *nitocris* was "one male taken at White Mountains, Arizona, by Lieut. Henshaw of the exploring Expedition under Lieut. Wheeler, August, 1873."

In volume one of his *Butterflies of North America,* Mr. Edwards says in regard to *nokomis,* "The original specimen from which the description of the species was drawn was received by me in 1862, through the Smithsonian, and was labelled 'Bitter Root Mountains' . . . . Until the present year (1872) it has been an unique in my collection and, so far as I know, not found in any other." Recently Mr. R. C. Williams, Jr., searched the Edwards-Holland collection in Pittsburgh for this type but was unable to find it. *Nokomis* was twice figured by Mr. Edwards for this Volume I, the upper and under sides of the male being given, and drawn by D. Wiest, but this plate was not published and the American Entomological Society, which issued the volume, still possesses the withdrawn plates. Mr. Edwards, having received five males and two females, of what I call *apacheana,* brought from Arizona by the Exploring Expedition under Lieutenant Wheeler, in 1871, beautifully figured both sexes, the drawings

in the plate actually published having been made by Mrs. Peart.

Mr. B. Neumoegen received quite a number of both sexes of *apacheana* and the specimens in collections are from this material. Mr. Jacob Doll informed me that all these specimens were shipped from Kanab, Utah, but he did not know the exact locality where they were taken. There can be no question but that the original description of *nokomis* applies to what we know as *nitocris* and therefore *nitocris* becomes a synonym of *nokomis*.

If anyone possesses specimens of *apacheana*, with accurate data, it would be very useful to have the localities and dates of capture published. At present I am not prepared to say anything about the specific value of the two names, but I have not seen any maculation characters that show intergradation.

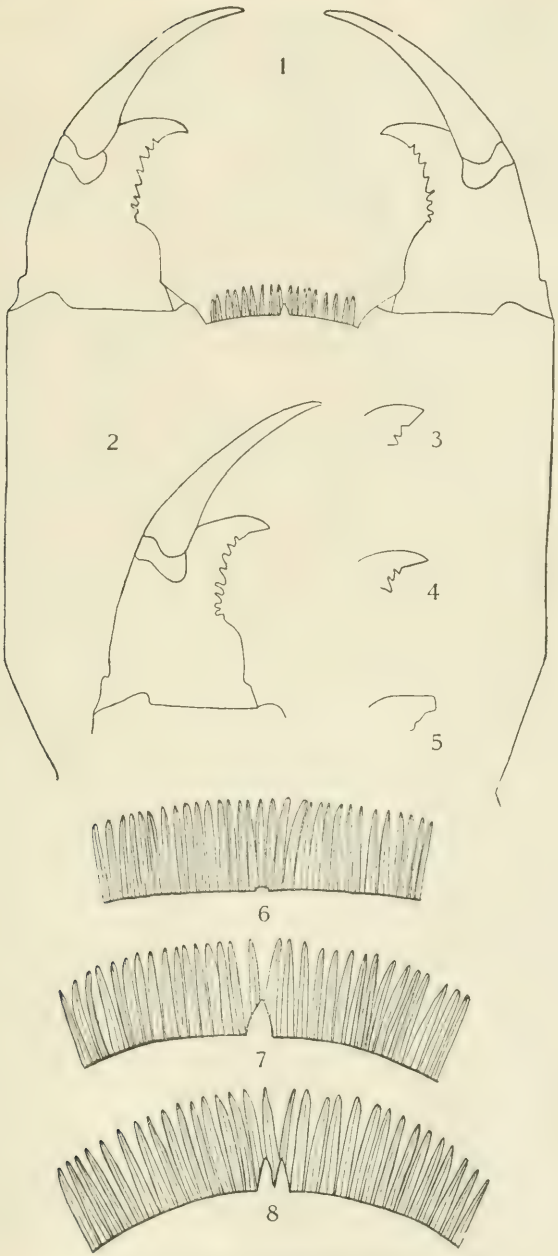
Variation in Labial Characters in the Nymph of Gomphus spicatus (Odonata).

By Alice L. Stout, Buffalo, New York..

In the identification of a collection of *Gomphus* nymphs sent to the Limnological Laboratory of Cornell University, slight variations were noticed in the minute characters of labia whose general form seemed identical. As the labial characters are those most depended upon for the separation of species, it was necessary to study the variation in one species before using the minute characters to differentiate between species. The material for this study was one hundred and ten exuviae of nymphs of *Gomphus spicatus* collected by Dr. Needham at one time and place.

The labial characters used for the separation of species are as follows: The shape of the median lobe, the presence or absence of a median tooth on this lobe, the form of the median tooth when present, the number and shape of the teeth on the inner margin of the lateral lobes.

In the following study, variations in the above points were noted. I mounted one hundred and ten labia from the above



Variations in labia of *Gomphus spicatus* larvae.

mentioned material. The most typical form was that shown in Fig. 1. The variations occurred in various characters.

The *end hook* showed four tyes: Type I (Fig. 2) was long with the first tooth indistinctly separated from it. There were fifty-five specimens of this type.

Type II (Fig. 3) was short with the first tooth indistinctly separated from it. There were forty-eight specimens of this type.

Type III (Fig. 4) was long with the first tooth distinctly separated from it. There were five specimens of this type.

Type IV (Fig. 5) was blunt at the end and occurred six times.

The number of *teeth on the lateral lobe* varied from four to ten. The most usual number was six or seven. The variations toward few or many were both rare as is shown by the data:

	Left lobe	*Right lobe*
Number of teeth	4, 5, 6, 7, 8, 9, 10	4, 5, 6, 7, 8, 9, 10
Frequency	1, 8, 40, 44, 16, 0, 1	0, 7, 39, 44, 18, 1, 1

The *median lobe* varied in shape from nearly straight to very convex (Figs. 6, 7 and 8). The tooth on the front margin was single or double. Each of these forms varied from rudimentary to pointed. In some cases it was absent. The occurrences were as follows: Median tooth absent in eight cases, single and rudimentary fifty-one cases, single and pointed thirty cases, bifid and rudimentary five cases, bifid and pointed nine cases.

These variations show that the detailed characters which have been used to differentiate between species cannot be used as absolute criteria, but must be considered with general shape and size of the labia, which remain fairly constant in one species.

Professor F. L. Washburn Ceases to Be State Entomologist.

In order to be enabled to devote all of his time to closely allied economic work in the Agricultural Department of the University of Minnesota, Professor F. L. Washburn, for fifteen years State Entomologist, has asked and obtained the consent of the Board of Regents of the University to drop the State Entomologist work, with its attendant police and quarantine duties, this change to be effective February 6th, 1918.

ENTOMOLOGICAL NEWS.

PHILADELPHIA, PA., FEBRUARY, 1918.

Entomology at the Convocation Week Meetings.

As announced in the NEWS for December last (page 469), we shall not print a list of the papers bearing on entomology presented at the meetings of various societies at Pittsburgh and at Minneapolis, between December 27, 1917, and January 2, 1918. In spite of the special conditions induced by the war and the extremely cold weather upon railroad transportation, and of the deterrent letter of the President of the American Association for the Advancement of Science (published in *Science* for December 28 and elsewhere), the attendance seems to have been fair. We are informed that 50 to 60 persons were present at the meetings of the Entomological Society, 25 to 50 at those of the Ecological Society, and 20 to 200 at those of the Naturalists. The total number of papers of entomological bearing listed on the printed programs, with some additions of which we have been informed, was, at Pittsburgh, 96, or, if we add those forming parts of the Paleontological Society's symposium on "Problems in History of Faunal and Floral Relationships in the Antillean-Isthmian Region and their Bearing on Biologic Relationships of North and South America" (8 titles) and those constituting the Naturalists' symposium on "Factors of Organic Evolution" (6 titles),—110, and 9 at the Zoologists' meeting at Minneapolis—a grand total of 119, in comparison with 139 at New York in the preceding year (see the NEWS for February, 1917, page 88).

The above-quoted total of 96 was made up of 24 papers from the program of the Entomological Society of America, 48 from that of the American Association of Economic Entomologists with 7 from its Apicultural and 4 from its Horticultural Inspection Sections, 3 from the Ecological Society of America, 1 from the American Phytopathological Society,

7 from the American Society of Naturalists and 2 from Section F, A. A. A. S.

The subject of the annual address to the Entomological Society was "The Biological Aspects of the War" by Prof. Vernon Kellogg, that of the President (Prof. R. A. Cooley) of the Economic Entomologists, "Economic Entomology in the Service of the Nation." Dr. L. O. Howard was scheduled to take part in Section F's symposium on "Contributions of Zoology to Human Welfare." Other topics of more than ordinary interest to be treated were: "The Bioclimatic Law of Latitude, Longitude and Altitude, as applied to Entomological Research and Practice," by A. D. Hopkins; "Distribution of the Maritime Diptera of Eastern North America," by C. W. Johnson; "Reminiscences of my early work upon the Diptera," by S. W. Williston; "Insects and Camp Sanitation," by E. P. Felt; a general discussion on "How can the Entomologist assist in Increasing Food Production?" and moving pictures of Gipsy Moth Work in New England, conducted by the U. S. Bureau of Entomology. Doubtless some of the papers on the geographical distribution of plants at the joint session of the Ecological and Botanical Societies will be helpful to entomologists. As in 1916, the Zoologists, Anatomists and Ecologists distributed, some days before their meetings, printed abstracts of the papers to be presented at their sessions.

Notes and News.

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE.

Benjamin Dann Walsh.

A brief account of the life of Benjamin Dann Walsh, whose likeness appears on the cover of the NEWS for 1918, was published in this journal, volume V, pages 269-270, November, 1894, accompanied by a different portrait.

Emergency Entomological Service.

Numbers 8 and 9 of these mimeographed Reports issued by the United States Department of Agriculture appeared under the dates of November 6 and December 3, 1917, respectively. No. 8 is supplementary

to No. 7 (noted in the NEWS for December, 1917, page 470), as it contains reports received too late for inclusion in the latter; additional data on the cotton boll weevil in South Carolina, Georgia, Tennessee and Oklahoma are recorded; *Euphoria inda* is noted as injuring cotton bolls in Tennessee for the first time; injuries to apples, due to the codling moth are widespread, as in New York, Oregon, Tennessee and Utah; corn-stalk borers and peach-twig borers in Arizona, fall migrant aphids in Idaho, apple and thorn skeletonizer (*Hemerophila pariana*) in New York, *Crioceris asparagi* for the first time in Oregon, the strawberry root louse in Tennessee and grasshoppers (4 spp.) in Utah receive special mention.

No. 9 contains a report of the Federal Horticultural Board on two additional outbreaks of the pink boll-worm in Texas, reported to the Department early in November. The more serious of these is at Trinity Bay, north of Galveston, "the total infested area involved being upwards of 5,000 acres"; "clean-up operations are being pushed with the utmost speed." Results of a recent trip by Mr. Busck to study the status of this insect in Mexican cotton fields are given.

"As the season of field activities for 1917 nears its end, the outlook as regards the chief insect pests of cereal and forage crops in general is encouraging. With the exception of white grubs and grasshoppers, none of the more dangerous enemies seems to be present in sufficient numbers to warrant apprehension. Of course, this does not mean that a great outbreak of chinch bug, Hessian fly, army worm, or green bug cannot occur during the growing season of 1918. Nevertheless, field conditions at present indicate no such probability."

The sweet potato weevil (*Cyclas formicarius* Fabr.), "the most important pest of the year," was found in November for the first time in (coastal parts of) Georgia and Mississippi, as well as in Tennessee; data on the present known distribution of this species are given. Plans for extension work in bee-keeping west of the Appalachians are outlined. We shall reprint elsewhere in the NEWS a very interesting statement concerning *Icerya* control at New Orleans. There are reports from fourteen States and from Porto Rico, dealing with many insects of economic importance.

Report No. 10, for January 5, 1918, contains some little additional information on the pink boll-worm in Texas and Mexico. The Secretary of Agriculture has prohibited the importation of any variety of sweet potato or yam (*Ipomoea batatas* and *Dioscorea* spp.) from all foreign countries and from Hawaii and Porto Rico into any part of the United States, from January 1, 1918; this is in relation to the spread of the sweet potato weevil, for which additional localities in Mississippi are reported. The report from California, occupying nearly three pages, consists of a statement by Mr. George P. Gray on the consumption and cost of the economic poisons employed against

insects, fungi and rodents in that State. Mr. E. N. Cory, of the Maryland Experiment Station, proposes the installation of a large rotary dryer at each army cantonment for the drying of horse manure and the distribution of the dried article "through the help of the National Fertilizer Association at a cost plus percentage basis, thus relieving the soldiers and civilians of the menace of flies and providing for the farmer a source of fertilizer in the time of scarcity. Moreover, the number of cars required to handle this material will be greatly reduced from the number required under the old plan to handle daily the fresh manure produced at each camp."

Changes of Address.

C. W. Howard, Associate Professor of Entomology, University of Minnesota, will remove to Canton, China. Address: care of Canton Christian College, Hongkong, China.

H. H. Knight, formerly of Ithaca, New York, and F. R. Cole, of Hood River, Oregon, have entered military service.

J. S. Wade, Wellington, Kansas, to U. S. Bureau of Entomology, Washington, D. C.

Dr. J. Chester Bradley, of Cornell University, has accepted an assistant professorship of entomology at the University of California for 1918.

A New House Spider (Aran.).

One day in October, 1914, I was in a restaurant in Boston when a spider walked over the table and was caught. It looked different from any native species and I put it aside for further examination. In December, 1915, I stopped for a meal in the railroad restaurant at Cleveland, Ohio, and there a spider came onto the table and was caught. It turned out to be the other sex of the species found in Boston. In May, 1917, a friend who has a tannery in Danvers, Massachusetts, sent me another of the same species out of a bale of hides from Africa. I then consulted Mr. Banks and he was at once reminded of *Thanatus coloradensis* Keyserling and brought out a bottle of this species from Claremont, California, which on comparison proved to be the same as the eastern spiders. So it appears that we have here a western spider that takes readily to life about houses and is spreading across the country.—J. H. Emerton, Boston, Mass.

Interrelations of Different Species of Insects (Hom., Col., Hym.).

All things considered, the progress of *Icerya* control at New Orleans during the summer and fall [of 1917] has not been entirely satisfactory. Apparently several agents have retarded the successful propagation of the *Vedalia*. Chief among them must be mentioned the Argentine ant. This ant undoubtedly aids in a very material increase of the *Icerya*. In the fall of the year they reach their maximum numbers and these hordes so effectively patrol and guard the scale infestations that the

adult lady beetles are not allowed a moment's peace. By means of a natural protection the *Vedalia* larvae are not molested by the ants, nor are the stationary pupae, but the adults seem to lack this protective quality and many of them are actually killed and devoured by the ants. The extremely high temperatures accompanied by relatively high humidity during the summer exerted a very depressing effect upon the propagation of the *Vedalia*. They died off in millions so . . . that they could not entirely hold the scale in check. For about a month, from mid-September to the middle of October, the weather was ideal for their propagation and they did very nicely, then it turned much too cool and for the past six weeks [to Nov. 27] they have done very little outdoors. . . . . Very interesting results have been obtained through the very effective control of the Argentine ant in and around the hothouse used for the propagation of the *Vedalia*. Until the ants were controlled no difficulties were encountered in obtaining heavy infestations of the *Icerya* on three large *Pittosporum* bushes which were planted in the hothouse and caged for *Vedalia* propagation. Since the control of the ant, however, the *Icerya* is not doing nearly so well. The honeydew which was assiduously gathered by the ants for food now remains attached to the scales and as it continues to be excreted it drops down forming threads which "candy" in the dry atmosphere. So much of this honey-dew is in evidence that the plants have taken on a snowy appearance.—C. L. Marlatt in Report No. 9, Emergency Ent. Service, U. S. Dept. Agr., Dec. 3, 1917.

Maternal Care in Dinocoris tripterus Fab. (Hemiptera).

Early in February, 1917, in conversation with Ralph Ballin, a high school youth of this city, I learned that he had found on a banana, and still had in his care, a mother bug and her brood. I urged him to make what observations he could and later he presented me with the mother and her fifteen offspring. The adults and nymphs were identified by Mr. E. H. Gibson as *Dinocoris tripterus* Fab. Mr. Gibson writes that, so far as he has been able to learn, members of this genus occur only in Central and South America, and that the nymphs are in the second instar.

Since there was some doubt in the mind of Fabre as to the accuracy of the observations on the maternal instinct in Hemiptera, and as Kirkaldy has unearthed much evidence (Entomologist, 36: 113-120, 1903) to show the unfairness of Fabre, I quote the following from a letter from Ralph Ballin in reply to certain questions, with a figure made from a rough sketch by this youthful observer:

"Early in February I found the group, mother, empty egg shells and young, on part of the banana nearest the stalk; this was concealed by other bananas. The young were already hatched when I found

the group; they were ranged around the empty egg shells. These shells were all together, like the cells of a honey comb, and one end of each had been broken by the young as it emerged.

"Close to the egg shells and the young bugs was the mother. The entire group for the most part remained motionless and apparently lifeless. She neither brooded over the young, nor did the young crawl over the mother's body. Occasionally, however, one of the young would move and in so doing would disturb the others; except for this they remained motionless. The mother remained in the same position almost all the time: only a few times did she slightly shift her position to one side or the other."

With food abundant at hand, there was little occasion for much activity and still I hardly think it was entirely due to this cause that the mother remained with the brood into the second instar. While it is possible that the whole phenomenon is accidental, there is some probability that this is an actual case of maternal solicitude in this insect.

Further observations will have to decide whether the mother's close proximity to her brood is one of maternal solicitude or only one of physical economy.—PHIL RAU, St. Louis, Missouri.

Entomological Literature.

COMPILED BY E. T. CRESSON, JR., AND J. A. G. REHN.

Under the above head it is intended to note papers received at the Academy of Natural Sciences, of Philadelphia, pertaining to the Entomology of the Americas (North and South), including Arachnida and Myriopoda. Articles irrelevant to American entomology will not be noted; but contributions to anatomy, physiology and embryology of insects, however, whether relating to American or exotic species, will be recorded.

The numbers in **Heavy-Faced Type** refer to the journals, as numbered in the following list, in which the papers are published.

All continued papers, with few exceptions, are recorded only at their first installments.

The records of papers containing new species are all grouped at the end of each Order of which they treat. Unless mentioned in the title, the number of the new species occurring north of Mexico is given at end of title, within brackets.

For records of Economic Literature, see the Experiment Station Record, Office of Experiment Stations, Washington. Also Review of Applied Entomology, Series A, London. For records of papers on Medical Entomology, see Review of Applied Entomology, Series B.

2—Transactions, American Entomological Society, Philadelphia **4**—The Canadian Entomologist. **11**—Annals and Magazine of Natural History, London. **21**—The Entomologist's Record, London. **87**—Bulletin, Societe Entomologique de France, Paris. **99**—Cornell University Agricultural Experiment Station, Ithaca. **164**—Science Bulletin, University of Kansas, Lawrence. **179**—Journal of Economic Entomology. **180**—Annals, Entomological Society of America. **189**—Journal of Entomology and Zoology, Claremont, Calif. **195**—Bulletin, Museum of Comparative Zoology, Cambridge. **198**

—Biological Bulletin, Marine Biological Laboratory, Woods Hole, Mass. **200**—Bulletin Biologique de la France et de la Belgique **223**—Broteria, Revista de Sciencias Naturaes do Collegio de S. Fiel. (Ser. Zoologica). **324**—Journal of Animal Behavior, Cambridge. **344**—U. S. Department of Agriculture, Washington, D. C. **407**—Journal of Genetics, Cambridge, England. **411**—Bulletin, The Brooklyn Entomological Society. **447**—Journal of Agricultural Research, Washington. **538**—Lorquinia, Los Angeles, Cal. **540**—The Lepidopterist, Official Bulletin, Boston Entomological Club.

GENERAL SUBJECT. Bordage, E.—Phenomenes de transformation des tissus larvaires chez les insectes metaboles, **87,** 1917, 270-2. **Crampton, G. C.**—The probable color of the ancestral winged insects, **411,** xi, 116-18. **Hilton, W. A.**—Suggestions from the study of the central nervous systems of invertebrates, **189,** ix, 141-46. **Pemberton & Willard**—New parasite cages, **179,** x, 525-27.

PHYSIOLOGY AND EMBRYOLOGY. May, H. G.—Selection for higher and lower facet numbers in the bar-eyed race of Drosophila and the appearance of reverse mutations, **198,** xxxiii, 361-95 **Nabours, R. K.**—Studies of inheritance and evolution in Orthoptera, II-IV, **407,** vii, 1-70. **Rayburn, M. F.**—The Chromosomes of Nomotettix, **164,** x, 267-71. **Robertson, W. R. B.**—A deficient supernumerary accessory chromosome in the male of Tettigidea parvipennis, **164,** x, 275-92.

ARACHNIDA, ETC. Hirst, S.—On three new parasitic acari, **11,** xx, 431-34. **Howard, C. W.**—New tick record for Minnesota, **179,** x, 560. **Lizer, C.**—Une nouvelle coccidocecidie de l'Argentine, **223,** xv, 103-7.

Chamberlin, R. V.—The Gosibiidae of America north of Mexico, **195,** lvii, 205-55.

NEUROPTERA, ETC. Crampton, G. C.—A phylogenetic study of the larval and adult head in Neuroptera, Mecoptera, Diptera and Trichoptera, **180,** x, 337-44. **Hilton, W. A.**—The nervous system of Thysanura, **180,** x, 303-13. **Walker, E. M.**—The known nymphs of the No. American sps. of Sympetrum (Odonata), **4,** 1917, 409-18.

ORTHOPTERA. Hebard, M.—Notes on Mexican Dermaptera, **2,** xliii, 409-32.

HEMIPTERA. Funkhouser, W. D.—Biology of the Membracidae of the Cayuga Lake basin, **99,** Mem. 11, 445 pp. **Peterson, A.**—Studies on the morphology and susceptibility of the eggs of Aphis avenae, A. pomi, and A. sorbi, **179,** x, 556-60. **Ross, W. A.**—The secondary host of Myzus cerasi, **4,** 1917, 434.

Gibson & Wells—A key to the species of the genus Ceresa, occurring north of Mexico, and the description of a new sp., **411,** xi, 110-13.

LEPIDOPTERA. Clark, H. L.—Preparatory stages of Homoptera unilineata, **411,** xi, 103-6. **Cockerell, T. D. A.**—The geometrid genus Barnesia [preoccupied], **411,** xi, 115. **Klotz, H.**—Butterflies of Elysian Park, **538,** ii, 38-9. **Lichti, Shallenberger & Johnson**—A tentative list of moths from the Claremont-Laguna region, **189,** ix, 125-137.

Barnes & McDunnough—New No. American Phycitinae [1: 6], **4,** 1917, 404-6. **Cassino, S. E.**—A new Apantesis. A new variety of Catocala lacrymosa. Note on Catocala helena, **540,** i, 100-101; 104.

DIPTERA. Bishop, Mitchell & Parman—Screw-worms and other maggots affecting animals, **344,** Farm. Bul. 857. **du Buysson, H.**—(See under Coleoptera.) **Crampton, G. C.**—(See under Neuroptera.) **Crumb & Lyon**—The effect of certain chemicals upon the oviposition in the house-fly, **179,** x, 532-36. **McCulloch & Yuasa**—Notes on the migration of the hessian fly larvae, **324,** vii, 307-23. **Malloch, J. R.**—Key to the subfamilies of Anthomyiidae, **4,** 1917, 406-8. **de Peyerimhoff, P.**—Ceratopogon et Meloe, **87,** 1917, 350-53. **Ping, C.**—Observations on Chironomus decorus, **4,** 1917, 418-26.

Felt, E. P.—Asphondylia websteri n. sp., **179,** x, 562. **Greene, C. T.**—Two new cambium miners, **447,** x, 313-17. **Guthrie, E.**—New Mycetophilidae from California [1 n. g.; 5 n. sps.], **180,** x, 314-22. **Malloch, J. R.**—A new genus of Anthomyiidae [2 n. sps.], **411,** xi, 113-15.

COLEOPTERA. du Buysson, H.—Observations sur des nymphes de Coccinella septempunctata parasitées par le Phora fasciata, **87,** 1917, 249-50. **Martin, J. O.**—In quest of Dinapate wrightii, **411,** xi, 107-10. **Palmer, M. A.**—Additional notes on heredity and life history in the coccinellid genus Adalia, **180,** x, 289-302

Carnochan, F. G.—Hololeptinae of the U. S. [1 n. g.; 9 n. sps.], **180,** x, 367-98. **Fall, H. C.**—Two new varieties of Cicindela tranquebarica from California, **411,** xi, 106.

HYMENOPTERA. Cockerell, T. D. A.—Descriptions and records of bees—LXXVIII, **11,** xx, 436-41. **Donisthorpe, H.**—Ichneumons versus Apanteles, **21,** xxix, 231-2. **Ewing, H. E.**—Parthenogenesis in the pear-slug saw-fly, **180,** x, 330-36. **Jones, T. H.**—Occurrence of a fungus-growing ant in Louisiana, **179,** x, 561. **Kelly, E. O. G.**—The biology of Coelinidea meromyzae, **179,** x, 527-31.

Wheeler, W. M.—Jamaican ants collected by C. T. Brues, **195,** lxi, 457-71.

Girault, A. A.—Notes on Hymenoptera Parasitica [1 n. g.; 2 n. sps.], **411,** xi, 118. **Isely, D.**—A synopsis of the petiolate wasps of the family Eumenidae, found in North America [9 new], **180,** x, 345-66. **Rohwer, S. A.**—The No. American wasps of the subgenus Pemphredon [4 new], **411,** xi, 97-102.

Doings of Societies.

Entomological Society of France.

The treasurer's report of the Entomological Society of France for 1916 shows receipts to the amount of 27,670 francs and expenditures (including investments) of 25,400 francs. The capital of the Society December 31, 1916, was 139,038 francs. (Bull. Soc. Ent. France, 1917, No. 7). The Society awarded the Dollfuss prize for 1916 of 300 francs to Prof. Auguste Lameere, of the University of Brussels, for his works on Prionidae, and the Constant prize of 1916 of 500 francs to J. Sainte-Claire Deville for his *Catalogue critique des Coléoptères de la Corse* (1914).

Entomological Section, Academy of Natural Sciences of Philadelphia.

Meeting of November 22, 1917, Director Philip Laurent presiding and eight persons present. Henry W. Fowler was elected a contributor.

Mr. J. A. G. Rehn made a communication on the physiography of several collecting regions of southern Arizona, illustrated by lantern slides.

Diptera.—Dr. Skinner read an abstract of an article by McDunnell & Eastwood, relative to the overwintering of the house fly. Dr. Calvert exhibited larvae of Bibionidae (identified by comparison with fig. 225, p. 476, of Vol. vi, Cambridge Nat. Hist.), some of a very great number found near Media, Pennsylvania, November 11, 1917, by Dr. J. P. Moore. The larvae were observed in an area of about two square feet, at a depth of 2-3 inches, in soil near a peach tree, on which soil goat manure, mingled with decaying corn stalks and forest leaves, had been placed in the preceding winter. He referred to similar observations in the work cited, in Packard's "Guide to the Study of Insects," and in Kellogg's "American Insects."

Lepidoptera.—Mr. Laurent presented two specimens of *Aethaloptera anticaria* Walker from Chestnut Hill, Pennsylvania, and blown larvae of three species of *Datana.* He also exhibited an interesting abnormal male of *Samia cecropia,* also a female *cecropia* seven and one-eighth inches in expanse. The speaker stated that this was the largest

specimen, by a quarter of an inch, out of many hundred that he had bred. Dr. Skinner spoke about his work on the genitalia of *Argynnis*.

Orthoptera.—Mr. Rehn commented on, and gave some illustrations of the genitalic characters of several Orthoptera, showing that the value of certain characters is not constant in the various groups or families.—E. T. CRESSON, JR., *Recorder*.

OBITUARY NOTES.

ANTOINE GROUVELLE, specialist on the Clavicorn Coleoptera, died at Neuilly-sur-Seine, France, June 9, 1917, aged 74 years. He became a member of the Entomological Society of France in 1870, served as President in 1891 and 1897 and was elected an honorary member in 1911. Until his retirement, in 1907, he was Director of the State Tobacco Factory. His papers number more than 150, one of the latest having appeared in the Bulletin of the French Society for March 28, 1917. His collection of Coleoptera, said to be very large and valuable, was bequeathed to the Paris Museum. (Obituary notices in Bull. Soc. Ent., Fr., 1917, pp. 181-2, and Ent. Mo. Mag., August, 1917.)

The deaths of Commandant PIERRE XAMBEU, "author of numerous works of compilation on the larvae of Coleoptera," at Ria, Pyrénées-Orientales, France, on June 9, 1917, aged 80 years; of Dr. E. A. GÖLDI, formerly director of the museum at Para, Brazil, subsequently named the Museu Göldi in his honor, at Berne, Switzerland, July 5, 1917; and of Dr. MAX STANDFUSS, of Zürich, well known for his experimental researches on the variability of Lepidoptera (date of death not given), are announced in the Bulletins of the Entomological Society of France, 1917, Nos. 12 and 14.

Among the deaths of entomologists during 1917, as a result of the war, we note with sorrow and sympathy for his father, that of REGINALD JAMES CHAMPION, Lieutenant, Scots Guards, July 18, 1917, at the age of 22. He had already published four papers on insects. (Ent. Mo. Mag., London, Sept., 1917.)

EXCHANGES.

This column is intended only for wants and exchanges, not for advertisements of goods for sale. Notices not exceeding three lines free to subscribers.

☞ These notices are continued as long as our limited space will allow; the new ones are added at the end of the column, and only when necessary those at the top (being longest in) are discontinued.

I have to offer in exchange *Oreta rosea* and var. fresh from pupae, also live pupae of *Papilio asterias*.—FRANK G. SLENTHER, 1705 N. Fremont St., Chicago, Ill.

Wanted for cash or exchange.—Buprestidae and Cerambycidae new to my collection.—J. N. Knull, Hummelstown, Pa.

Duplicate Rhopalocera from Japan and Formosa. Desiderata—Those from the world.—S. Satake, No. 48 Aoyamaminamimachi 5 chome Tokyo, Japan.

Cicindelidae Wanted—I wish to obtain for purposes of study, Cicindelas, "tiger beetles," from the Southern and Gulf States. Correspondence desired.—Edwin E. Calder, Longmeadow, R. I.

Wanted—North American Coleoptera for exchange. Please send lists to V. Harnach, 1759 W. 20th St., Chicago, Illinois.

South American Erycinidae and Lycaenidae are offered in exchange for North American moths (Noctuids, Geometers, etc.).—G. Chagnon, P. O. Box 521, Montreal, Canada.

Wanted—Monog. des Buprestides—Kerremans, Vol. II, Pt. 1; Bibliog. Econ. Ent., Pt. IV; Mo. Bul. Cal. Com. Hort., Vol. I, No. 9, and Vol. II, Nos. 3 and 4.—E. A. Klages, Crafton, Pa.

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771.—**Smith** (L. W.).—Studies of North American Plecoptera (Pteronarcinae and Perlodini). (Tr. **43**, 433-489, 6 pls., '17) 1.00

ORTHOPTERA.

767.—**Hebard** (M.).—The Blattidae of North America, north of the Mexican Boundary. [5 n. gen., 7 n. sps]. (Mem. **2**, 284 pp., 10 pls., '17) 4.50

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